



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/853,443	05/11/2001	Dale E. Gulick	2000.039600/TT3769	6306

23720 7590 03/22/2006

WILLIAMS, MORGAN & AMERSON  
10333 RICHMOND, SUITE 1100  
HOUSTON, TX 77042

EXAMINER

LANIER, BENJAMIN E

ART UNIT PAPER NUMBER

2132

DATE MAILED: 03/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.



UNITED STATES PATENT AND TRADEMARK OFFICE

---

Commissioner for Patents  
United States Patent and Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 09/853,443  
Filing Date: May 11, 2001  
Appellant(s): GULICK ET AL.

**MAILED**

**MAR 22 2006**

**Technology Center 2100**

---

Mark W. Sincell  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 28 July 2005 appealing from the Office action mailed 21 March 2005.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is incorrect. A correct statement of the status of the claims is as follows:

Claims 1-80 are pending in the application. Claims 1-24, 26-71, and 73-80 stand fully rejected under 35 U.S.C. 102(e) as being anticipated by Gennaro (U.S. Patent No. 6,317,834). Claims 25 and 72 stand finally rejected under 35 U.S.C. 103(a) as being unpatentable over Gennaro in view of Huang (U.S. Patent No. 5,856,789).

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

Art Unit: 2132

**(8) Evidence Relied Upon**

6,317,834	GENNARO	11-2001
5,856,789	HUANG	1-1999

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-24, 26-71, 73-80 are rejected under 35 U.S.C. 102(e) as being anticipated by Gennaro, U.S. Patent No. 6,317,834. Referring to claims 1-4, 8-12, 14-16, 21-24, 26, 28-31, 32, 35, 36, 39-47, 50-62, 65, 66, 68-71, 73, 75-80, Gennaro discloses a biometric authentication system wherein biometric information in the form of fingerprints, voice pattern, retinal pattern, iris scans, and signatures (Col. 1, lines 35-39) are captured along with personal information unique to each individual (Col. 1, lines 62-67 & Col. 2, lines 32-34), which meets the limitation of receiving biometric data. The biometric data is then encrypted with random data (Col. 2, lines 1-5, 27-31), which meets the limitation of receiving a nonce, and encrypting the biometric data using the nonce and to transmit only encrypted biometric data and the nonce. The encrypted biometric information is then stored along with the random data in a biometric database (Col. 2, lines 45-57). The system is also capable of decrypting the biometric data (Col. 3, lines 4-19),

Art Unit: 2132

which meets the limitation of the master device decrypting the encrypted biometric data.

Gennaro discloses the user inputting personal information as a response to random challenge questions (Col. 2, lines 28-34). The personal information meets the limitation of a secret. These responses are used in a computing environment to calculate data and would therefore be stored in some fashion. Since Applicant's claim requires only "to store the secret", the limitation is met because non-volatile and volatile storage alike would meet this limitation. Therefore, these responses being received into a computing environment would require them to be at least temporarily stored within a memory or a cache of some variety in order for them to be used within the computing environment. The responses can then be used to generate an encryption key and encrypt the biometric data (Col. 2, lines 34-47), which meets the limitation of encrypting the biometric data using the secret, transmitting at least an indication of the secret with the biometric data, and transmitting only the encrypted biometric data and the nonce.

Referring to claims 5, 18, 33, 48, 63, Gennaro discloses that the random data and the responses, which act as the secret, are used to generate the encryption key that encrypts the biometric data (Col. 2, lines 27-47), which meets the limitation of encrypting the biometric data using the secret and the nonce.

Referring to claims 6, 13, 19, 27, 34, 37, 49, 64, 67, 74, Gennaro discloses that one of the responses could be a telephone number (Col. 9, lines 10-12), which meets the limitation of a globally unique identifier that is used, along with the secret and the nonce (addressed above), to encrypt biometric data.

Referring to claims 7, 20, Gennaro discloses acquiring a personal identifier (Col. 2, line 9), which would meet the limitation of the secret comprising a GUID.

Referring to claims 16, 17, 35, 38, 46, 50, 61, 65, Gennaro discloses that in order to authenticate a biometric record the user provides the system with a personal identifier, which meets the limitation of a GUID or secret, and a biometric sample that corresponds to the biometric record that is being authenticated (Col. 4, lines 41-56).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 25, 72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gennaro, U.S. Patent No. 6,317,834, in view of Huang, U.S. Patent No. 5,856,789. Referring to claims 25, 72, Gennaro discloses a biometric authentication system wherein biometric information in the form of fingerprints, voice pattern, retinal pattern, iris scans, and signatures (Col. 1, lines 35-39) is captured along with personal information unique to each individual (Col. 1, lines 62-67 & Col. 2, lines 32-34), which meets the limitation of receiving biometric data. The biometric data is then encrypted with random data (Col. 2, lines 1-5, 27-31), which meets the limitation of receiving a

Art Unit: 2132

nonce, and encrypting the biometric data using the nonce and to transmit only encrypted biometric data and the nonce. The encrypted biometric information is then stored along with the random data in a biometric database (Col. 2, lines 45-57). The biometric information can also be encrypted using a key generated from password information (Col. 1, line 67 – Col. 2, line 2), which meets the limitation of receiving a secret, and encrypting the biometric data using only the secret. Gennaro does not disclose that the system utilizes a processor, north bridge, and south bridge. Huang discloses a computer system containing a processor, north bridge, and south bridge (Col. 2, lines 63-67). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a computer system configuration of Huang in the biometric authentication system of Gennaro because Huang discloses that disclosed computer system configuration is state of the art (Col. 2, line 63).

#### **(10) Response to Argument**

Applicant's arguments filed 28 July 2005 have been fully considered but are not persuasive. Applicant argues that Gennaro does not disclose a nonce, which is not persuasive because Gennaro discloses that biometric data is encrypted with an encryption key generated from a random combination of answers provided by the individual during a challenge/response session (Col. 2, lines 27-31). After an authentication attempt a new challenge list is randomly generated to create the next encryption key (Col. 3, lines 15-19). This meets Applicant's definition of a nonce because new random challenges are generated each time, and would therefore be a "used a single time". Applicant pointed to page 35, lines 16-21, to define a nonce and the recitation states :

“One use of the monotonic counters 435A and 435B is a source for a nonce. Each nonce must be different. Differences may be predictable or unpredictable. Nonces may be used to help prevent replay attacks. When a message is encrypted, changing even one bit changes the encrypted message. Any strong encryption method distributes even one-bit change extensively. A nonce may be used in a challenge-response method, such as described below.”

The above-mentioned recitation of Gennaro meets Applicant’s definition because new randomly generated challenges are generated (Col. 3, lines 15-20) and the challenges can be prompting the user for personal information such as a zip code, telephone number, or birth date (Col. 9, lines 7-11). Therefore, Gennaro’s challenges are changed even one-bit and used in a challenge response method.

Applicant argues that Gennaro does not disclose authenticating biometric data using a random number is not persuasive because Gennaro using the randomly generated key to decrypt a stored biometric sample and if the decryption is unsuccessful, the individual cannot be verified and his or her authorization status will be declared as “failed”, thereby terminating the verification session (Col. 7, lines 31-35). Therefore, Applicant’s argument that decryption is not the same operation as authentication is not persuasive because in the system of Gennaro, decryption is effectively used for authentication.

Applicant’s arguments with respect to the combination of Gennaro in view of Huang are identical to the previous arguments about Applicant’s definition of a nonce, and have been fully addressed above.

#### **(11) Related Proceeding(s) Appendix**



No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

This examiner's answer contains a new ground of rejection set forth in section (9) above. Accordingly, appellant must within **TWO MONTHS** from the date of this answer exercise one of the following two options to avoid *sua sponte* **dismissal of the appeal** as to the claims subject to the new ground of rejection:

(1) **Reopen prosecution.** Request that prosecution be reopened before the primary examiner by filing a reply under 37 CFR 1.111 with or without amendment, affidavit or other evidence. Any amendment, affidavit or other evidence must be relevant to the new grounds of rejection. A request that complies with 37 CFR 41.39(b)(1) will be entered and considered. Any request that prosecution be reopened will be treated as a request to withdraw the appeal.


(2) **Maintain appeal.** Request that the appeal be maintained by filing a reply brief as set forth in 37 CFR 41.41. Such a reply brief must address each new ground of rejection as set forth in 37 CFR 41.37(c)(1)(vii) and should be in compliance with the other requirements of 37 CFR 41.37(c). If a reply brief filed pursuant to 37 CFR 41.39(b)(2) is accompanied by any amendment, affidavit or other evidence, it shall be treated as a request that prosecution be reopened before the primary examiner under 37 CFR 41.39(b)(1).

Extensions of time under 37 CFR 1.136(a) are not applicable to the TWO MONTH time period set forth above. See 37 CFR 1.136(b) for extensions of time to reply for patent applications and 37 CFR 1.550(c) for extensions of time to reply for ex parte reexamination proceedings.

Art Unit: 2132

Respectfully submitted,

Benjamin E. Lanier

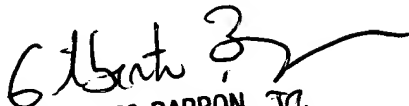


**A Technology Center Director or designee must personally approve the new ground(s) of rejection set forth in section (9) above by signing below:**


Conferees:

Gilberto Barron

Matthew Smithers



GILBERTO BARRON JR.  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100



MATTHEW SMITHERS  
PRIMARY EXAMINER  
Art Unit 2137